Midterm elections' stock market surge – an unintentional gift from US politicians [Δ]

Jędrzej Białkowski[a,*], Aynaz Nahavandi[b]

[a] *Department of Economics and Finance, University of Canterbury, Private Bag 4800, Christchurch, New Zealand*

[b] *Department of Economics and Finance, University of Canterbury, Private Bag 4800, Christchurch, New Zealand*

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Abstract

The paper provides evidence for the existence of a midterm election effect on the US equity market. By examining the quarterly total returns on the S&P 500 Index between 1954 and 2017, we show that, nine times out of 10, the index has been positive in the fourth quarter of a midterm election year and the following two quarters. This compounds to nearly 25% in those three quarters. Neither changes in the monetary nor the fiscal policies were able to explain the effect. Moreover, the authors show that the known third year of a presidential term effect is weaker than the examined midterm election effect. Our results are robust for selection time period.

JEL classification: G11; G12; G14

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[*] Corresponding author: Jędrzej Białkowski; Tel. +64 3 3643316; E-mail address: jedrzej.bialkowski@canterbury.ac.nz

Introduction

A number of studies have explored the behavior of equity markets around national elections. The research is motivated by the idea that when politicians speak, markets respond. The impact of political uncertainty on capital markets attracts substantial attention from scholars. Bialkowski et al. (2008) investigate stock market uncertainty around national parliamentary and presidential elections on a sample of 27 OECD countries and conclude that political uncertainty results in higher stock market volatility. Likewise, Goodell and Vahamaa (2013) confirm this idea and show in their study that political uncertainty around the US presidential elections affects stock market volatility. Julio and Yook (2012) provide evidence that political uncertainty matters for firms. For a sample of 48 countries, they find that political uncertainty reduces firms' investment expenditures until the uncertainty is resolved. It is reasonable to accept that changes in firms' investment behavior will also affect market investors' attitudes. In another example, Li and Born (2006) report that stock market volatility and average returns are higher for US presidential elections, preceded by polling data sending ambiguous signals about the likely winner. Those empirical studies are followed by Pastor and Veronesi (2012, 2013), whose studies develop the first general equilibrium model in which equity prices respond to the political climate.

No less important and very appealing to the investment community is the topic of the political business cycle and elections. The performance of the stock market during the four-year presidential cycle has attracted the attention of several scholars. Studies by Allivine and O'Neill (1980), Booth and Booth (2003), Gartner and Wellershoff (1995), Huang (1985), and Stovall (1992) emphasize the so-called second-half effect and confirm that

stock market returns exhibit a four-year US presidential cycle and that returns are significantly higher during the last two years of presidential administrations. Further, Ramchander et al. (2009) find a presidential election cycle pattern in real estate investment trust returns (REITs). They report higher excess returns in the second half of the US presidential cycle.

The studies by Beyer et al. (2008), Booth and Booth (2003), Sturm (2013), and Wong and McAleer (2009) scrutinize the so-called third-year effect in the US presidential cycle and find that the average returns of the third year are the highest among the four-year presidential cycle. Beyer et al. (2008) offer a detailed analysis of the effect. They examine quarterly returns of S&P 500 firms between 1957 and 2004 and report a strong market performance in the third year of the US presidential term. They do not find evidence that higher returns are a compensation for higher risk. However, their analysis indicates that fiscal and monetary policy may play a role in explaining the observed returns patterns. On the other hand, Sturm (2013) shows that although tax legislation may drive the presidential cycle, the third-year effect is independent of the government's influence on economic policy. Sturm finds no strong evidence supporting the effect of fiscal and monetary policies on the presidential cycle in the period between 1972 and 2007. However, he states that tax acts were mostly passed during the first half of the president's term (68.75%), and considering the one- or two-year delay in seeing the effect of tax legislation on the economy, the presidential cycle might be explained with the timing of the tax legislation.

The aim of this paper is to examine the so-called midterm election effect on the US equity market. The effect has not been previously documented in the academic literature (see Wisniewski 2016 for a comprehensive literature survey), despite the fact that some

initial evidence has been presented in the financial press. In September 2014, the *Financial Times* published a column[1] by Ken Fisher, who called the performance of the stock market after the midterm election an "86.4% miracle," due to a very predictive pattern. In November 2014, a contributor to the *Forbes* website,[2] Bill Greiner, described the oddity of post-election stock market cycles in the November–January period after midterm elections. In a 2010 BlackRock newsletter,[3] Robert C. Doll, chief equity strategist, refers to the average S&P performance and its higher return in the six months and 12 months after midterm elections. He notes: "…regardless of what the new legislative priorities are in the coming year, one immediate and positive result of the elections is that the outcome has gone from being an 'unknown' to a 'known'."

Our paper offers a scholarly scrutiny of the midterm election effect on the US equity market. First, we examine whether any pattern is present in the US stock returns after the midterm elections and then carefully document the magnitude of it. Second, we compare the post-election stock market cycles for the presidential and the midterm elections. Finally, we examine whether fiscal or monetary policies are solely causing the distinctive return pattern.

Our paper provides ample evidence that the midterm effect is a standalone effect and is not fully explained by fiscal or monetary policies. The US stocks perform extremely well in the fourth quarter of a midterm election year and the two quarters following: on average,

[1] The column was published in the *Financial Times* 6–7 September 2014, under the title: "Stand by for the great midterm market surge."
[2] Retrieved: https://www.forbes.com/sites/billgreiner/2014/11/07/the-oddity-of-post-election-stock-market-cycles/#165355c66a0b
[3] Retrieved: http://www.boltonglobal.com/doc/What-Do-The-Midterm-Elections-Mean-For-Investors.pdf

8.89%, 8.02%, and 6.15% return per quarter, respectively. The historical average return hovers around 3%. Our analysis shows that the midterm election effect is stronger than the third year of the presidential-term effect.

Hypotheses

Political signals contain information about government plans and its commitment to implement them. Political signals are closely monitored by investors who use them to update their beliefs about the government's future policy decisions. Market participants' interpretation of signals leads to actions on the capital market. Thus, stock prices respond to political signals and their movement is stronger when political uncertainty –about future legislative priorities – is larger (see Pastor and Veronesi 2012, 2013). In the majority of cases, the post-election period brings one immediate and positive result – a clear outcome in terms of which party/presidential candidate has won. In other words, the post-election periods resolve some of the political uncertainty and reduce the market volatility. This may have an impact on the level of returns.

The analysis of the Economic Policy Uncertainty Index, which measures political uncertainty (see Baker et al. 2016 for details), shows that, on average, political uncertainty is higher after presidential elections. We calculated the average of the index in the three quarters around the midterm elections and the presidential elections. The value of the Economic Policy Uncertainty Index was on average 17.5% higher in the case of the presidential elections in the period Q1 1985 to Q2 2017.[4] The recent US elections have

[4] The results are available upon request. The starting date of the index is in January 1985. The source of data: Baker, Scott R., Bloom, Nick and Davis, Stephen J., Economic Policy Uncertainty Index for United States [USEPUINDXD], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/USEPUINDXD, November 5, 2017.

brought an increase in the average percentage; indeed, in the period between Q1 2004 and Q2 2017, it exceeded 45%.

Taking into account the difference between the levels of uncertainty observed after a presidential and a midterm election, we expect to observe higher returns in the first quarters after a midterm ballot-casting.

Data and methodology

In order to examine the potential effect, we collect the data on the midterm and presidential elections and quarterly returns on the S&P 500 Total Return Index for the period of Q2 1954–Q2 2017. The sample selection is determined by the availability of data for the approximate fiscal and monetary policy. The latter is approximated by the number of expansive quarters (change in the discount rate) and degree of monetary policy stringency (mean federal funds premium). A given quarter is classified as subject to an expansive monetary policy if the most recent change in the Federal Reserve Bank (Fed) discount rate was a reduction. The federal funds premium is measured as the federal funds rate less the 3-month T-bill rate. The impact of government action on the economy and the stock market is measured by the change in federal government spending and percentage change in federal tax receipts. The variables describing the fiscal and monetary policy were sourced from FRED Economic Data, St. Louis Fed. The S&P 500 Total Return Index comes from Global Financial Data. The information on the time of elections and results were

collected from the US House of Representatives website.[5]

To evaluate the robustness of our findings, we consider two alternative sub-periods, 1954 through 1989 and 1990 through 2017. Table 1 (Panels A and B) provides a description of the selected timeframe. In the period under consideration, there were 32 elections, with an equal number of presidential and midterm elections. The ballot-casting has left Democrats the winner 10 times and the Republicans five times. The 2006 midterm elections gave to both parties the same number of seats. In the case of presidential elections, nine times out of 16 a Republican candidate was elected as the head of state.

[5] The election data were retrieved from the website: http://history.house.gov/Institution/Election-Statistics/Election-Statistics/

Table 1: US Midterm and Presidential Elections (1954–2017)

Panel A: Presidential Election

	Total	1954–1989	1990–2017
Democrat	7	3	4
Republican	9	6	3
Total	16	9	7

Panel B: Midterm Election (Senate)

	Total	1954–1989	1990–2017
Democrat	11*	8	3*
Republican	6*	1	5*
Total	16	9	7

Panel C: Midterm Election (House)

	Total	1954–1989	1990–2017
Democrat	11	9	2
Republican	4	0	4
Total	15	9	6

The table summarizes the midterm and presidential elections in the period between 1954 and 2017. * denotes a special case: In the 2006 midterm election, both parties won 49 seats. Therefore, both parties are considered as a party gaining power.

Results

The main result of the paper is illustrated in Figure 1. As shown, the average S&P 500 return during the mid-election quarter and the two quarters following the midterm election is at least two times higher than during the non-election quarters. The comparison with presidential election quarters reveals that quarter returns after a midterm election are much higher. The figure confirms the anecdotal observation mentioned in the financial press – there is indeed a midterm effect and it is substantial. The average gain in the S&P 500 Total Return Index is 8.9% in the quarter that includes the midterm election (Quarter 4 on the figure), and 8.02% and 6.15%, respectively, in the two following quarters. This compounds

to 24.9%.

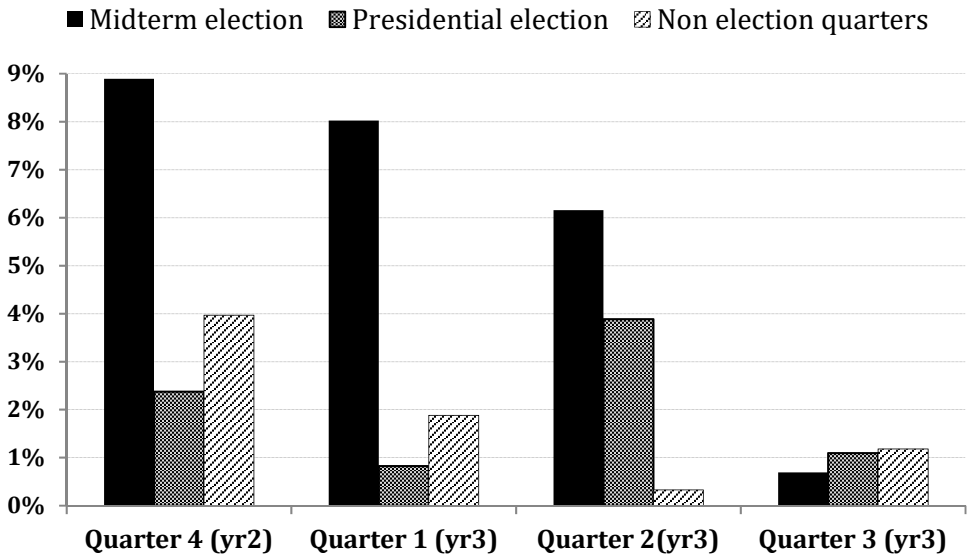

Figure 1: The bar graph shows the average quarterly returns from S&P 500 Total Return Index. The fourth quarter of a midterm election year and the two quarters following offer a superior US market performance in comparison with the same quarters in the not-midterm election years.

Table 2 provides further evidence on the surge of the stock market during the mid-election period. In the case of the examined three quarters in the non-midterm-election periods, the market is in positive territory 65–70% of the time. For the post-midterm-election period, it is positive 91% of the time and for the presidential election, it never exceeds 72%. The average return is 7.68%, 2.36%, and 1.82% for the midterm, presidential, and non-election three-quarters period, respectively. The 5% and 95% percentiles are -0.02% and 21.96% for midterm elections and -13.39% and 13.41% for the same quarters but in non-election periods. The further argument that an investment in the post-mid-election periods has a very small downside risk comes from the fact that the average return for negative quarters is in a range between -1.13% and -2.62%. It is not near to the loss of 6.5% on average for the non-election periods. In contrast, after presidential

elections, market participants are rewarded with a rather modest compounded return of 6.3% (versus 24.9%). The average return of 2.36% is just 0.5% higher than in the case of the non-election periods.

The analysis of Table 2 shows that the performance of the stock market after the US elections depends on the type of election and that the time around midterm elections is very unique.

Table 2: US Midterm and Presidential Elections Effects

	No. of observations (quarters)	No. of quarters Market falls	No. of quarters Market rises	Mean of return for quarters with negative return	Mean of return for quarters with positive return	5th Pctl.	95th Pctl.	Mean	*p-value*
Panel A: 1954 -2017									
Midterm election Q4, Q1, and Q2	48	9.1%	90.9%	-2.10%	8.57%	-0.02%	21.96%	7.68%	0.0001
Presidential election Q4, Q1, and Q2	48	29.2%	70.8%	-6.16%	5.87%	-11.01%	12.82%	2.36%	0.0289
Non-election quarters	127	34.6%	66.4%	-6.61%	6.29%	-13.39%	13.41%	1.82%	0.0109
Panel B: 1954-1990									
Midterm election Q4, Q1, and Q2	30	6.7%	93.3%	-2.62%	9.44%	-0.02%	21.34%	8.64%	0.0001
Presidential election Q4, Q1, and Q2	27	29.6%	70.4%	-3.89%	5.39%	-5.79%	9.52%	2.64%	0.0177
Non-election quarters	76	38.2%	65.4%	-6.86%	6.98%	-18.02%	14.08%	1.69%	0.0906
Panel C: 1991-2017									
Midterm election Q4, Q1, and Q2	21	14.3%	85.7%	-1.13%	7.58%	-0.02%	15.39%	6.34%	0.0001
Presidential election Q4, Q1, and Q2	21	28.6%	71.4%	-9.19%	6.48%	-11.85%	15.92%	2.00%	0.3323
Non-election quarters	55	30.9%	69.1%	-6.39%	5.50%	-13.39%	12.58%	1.82%	0.0610

The table summarizes the performance of the US stock market represented by the S&P 500 Total Return Index in the period between 1954 and 2017; the three quarters around the presidential and the midterm elections; Q4 is an election quarter. The *p-value* corresponds to the test that the mean is equal to zero.

One may argue that higher returns during the post-midterm-election period are compensation for the higher volatility; however, our analysis shows that annual volatility in the post-midterm-election periods is lower than in the non-election periods (12.7% versus 15.4%). The careful reader may notice that the two quarters after the midterm elections are exactly the two first quarters of the third year of the presidential term. Does this mean that the midterm effect is a by-product of the third-year effect? In order to answer that question, we calculate the performance of the fourth quarter in the year after midterm elections, which is 4.08%, and then we calculate the performance of the stock market for the period of four quarters, including the midterm election one, and during the third year of the presidential term. The performance in the extended post-midterm-election period (of four quarters) is 25.7% versus 20.1% achieved in the third year of a presidential term (see Figure 2). We conclude that the midterm effect dominates the third year of the presidential-term effect.

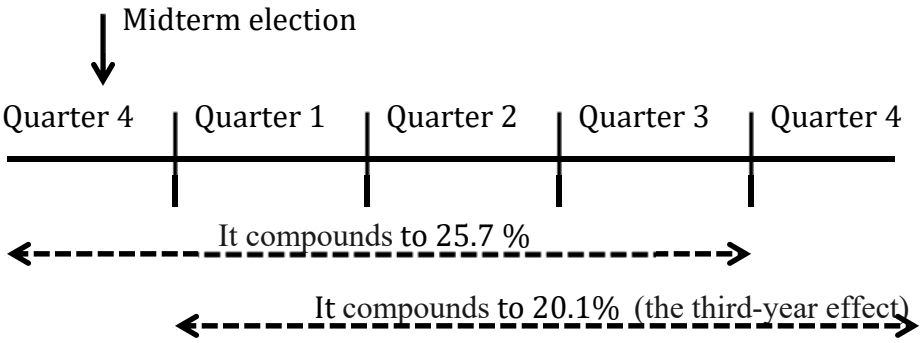

Figure 2: The graph explains the difference between the so-called third year of the presidential term and the midterm election effect.

In the next step of our analysis, we examine whether the observed effect is caused by monetary or fiscal policy. In the case of the former, we count expansive quarters as a

proxy of the Fed policy stance and federal funds premium as Fed policy stringency. A quarter is classified as subject to an expansive (restrictive) monetary policy if the most recent change in the Fed discount rate was a decrease (increase). Thus, the expansive quarter variable is a dummy variable, where a "1" corresponds to expansive policy in a given quarter. The federal funds premium is defined as the difference between the federal funds rate and the 3-month T-bill rate.

Past studies by Ho and Sauders (1985), Laurent (1988), Bernanke and Blinder (1992), and Bayer et al. (2008) use that federal funds premium as a good measure of the stringency of Fed monetary policy. Directional changes in the discount rate as an identification of broad shifts in Fed policy is pretty common (see Jensen et al. 1996, Conover et al. 2005, and Bayer et al. 2008, among others).

Fiscal policies and the level of spending are measures used by the federal government to stimulate the economy. Studies by Fama (1990), Cocharane (1996), and Campbell (1999) describe the relationship between the macroeconomic climate and the equity market. There is a large body of literature examining the link between fiscal policy and macroeconomic variables (Ramsey and Shapiro 1997 and Blanchard and Perotti 1999, among others). In order to examine the impact of fiscal policy on the equity market, we consider percentage change in federal tax receipts and change in current federal government spending.

Table 3 offers a valuable glance at the fiscal and monetary policies in post-election periods. Panels A–D represent different time periods after US elections. The key comparison is that of panel A with panel B and panel C with panel D, which reveals that there is not much difference in the examined policies between the post-election and non-

election periods. The *t*-statistics correspond to the t-test for the equal mean between the midterm election and non-election periods. In the case of considered fiscal and monetary measures, we are unable to reject the null hypothesis of equal means. This indicates that those policies were not responsible for the reported post-midterm effect.

Table 3: Fiscal and monetary policies in post-US-election periods

	# of qtrs.	Mean	Median	Std. Dev	5th Pctl	95th Pctl	T-stats
Panel A. Non-midterm election quarters (Q4, Q1 and Q2)	203						
Change in Tax Receipts		1.56%	1.71%	4.02%	-4.10%	6.21%	
Change in Current Spending		0.49%	0.37%	1.04%	-1.14%	2.28%	
Expansive		0.44%	0	0.50%	0	1	
Federal Funds Premium		0.47%	0.23%	0.82%	-0.21%	2%	
Panel B. Post Midterm election quarters (Q4, Q1 and Q2)	48						
Change in Tax Receipts		1.56%	1.08%	4.04%	-2.41%	5.76%	-0.01
Change in Current Spending		0.31%	0.41%	1.06%	-1.35%	1.73%	1.04
Expansive		0.52%	1	0.50%	0	1	-1.02
Federal Funds Premium		0.35%	0.22%	0.57%	-0.3%	1.11%	1.20
Panel C. Non-presidential election quarters (Q4, Q1 and Q2)	204						
Change in Tax Receipts		1.53%	1.52%	3.90%	-3.56%	5.97%	
Change in Current Spending		0.44%	0.41%	1.07%	-1.27%	2.24%	
Expansive		0.45%	0	0.49%	0	1	
Federal Funds Premium		0.46%	0.23%	0.78%	-0.21%	2%	
Panel D. Post Presidential election quarters (Q4, Q1 and Q2)	47						
Change in Tax Receipts		1.67%	2.12%	4.54%	-6.50%	6.21%	-0.20
Change in Current Spending		0.53%	0.25%	0.93%	-0.97%	2.17%	-0.57
Expansive		47%	0	50%	0	1	-0.21
Federal Funds Premium		0.37%	0.17	0.74%	-0.27%	1.3%	0.67

The table presents the summary statistics of the fiscal and monetary policy proxies in the post-election periods. The comparison of panel A with panel B and panel C with panel D allows drawing the conclusion that there is no statistical difference between those proxies (see the last column of the table, where the *t*-statistics for the test of equal mean is reported).

In order to better evaluate the contribution of fiscal and monetary policies to the midterm election effect, we also examine two separate regressions. In both cases, the

dependent variable in the first regression is quarterly return, and the independent variable is the dummy variable for the three quarters around the presidential or midterm elections (see Table 4). The dummy variable takes the value of "1" on the midterm (presidential) election quarter and the two quarters following. The three-quarters election dummy is significant (at the 1% level) only for midterm elections.

The objective of the second regression is to determine how much of the midterm election (and potential presidential election effect) is explained by the change of proxies for monetary and fiscal policies. In order to determine this, we perform a two-step regression. The first step is designed to remove the influence of the monetary and fiscal policy measures on the quarterly stock returns. The second step is designed to quantify the importance of the midterm election effect. The residuals from the first regression are included in the second (reported) regression as the dependent variable, and the independent variable is the three-quarters dummy variable. The analysis of the results reported in Table 4 shows that the monetary and fiscal policies account for a marginal amount of the midterm effect. After controlling for both key policies, the three-quarters midterm election dummy coefficient has changed marginally (from 0.0315 to 0.0304). Moreover, the results reported for the post-presidential-election period, also in the case of a two-level regression, indicates the lack of a statistically significant effect.

Table 4: Testing US midterm and presidential elections effect using regression

	Dependent Variable Return Close		Dependent Variable Model Residuals	
Index	Intercept	3 -quarters	Intercept	3-quarters
Presidential Election	0.0134	-0.0049	0.0010	-0.0054
	(0.0001)	(0.5168)	(0.7052)	(0.4599)
Midterm Election	0.0064	0.0315	-0.0058	0.0304
	(0.0236)	(0.0002)***	(0.0395)	(0.0002)***

The table presents regressions for the period between Q3 1954 and Q2 2017. The regressions are designed to test the post-election effect in the case of presidential and midterm voting. Columns 3 and 4 correspond to two-step regressions. ***denotes statistical significance at the 1% level.

Conclusions

This paper provides evidence for the midterm election effect. We show that returns from the S&P 500 Total Return Index were positive in the fourth quarter of midterm election years and the two quarters following – in nine out of 10 times. On average, the returns in those three quarters compounds to a whopping 24.9%. This is clearly an unintentional gift from US politicians to the market at the time when their trustworthiness is assessed by voters. The examined effect is not driven by changes in fiscal and monetary policies and is not compensation for higher volatility. The variability of returns in the post-midterm-election times is actually lower than in analogous periods.

The post-election surge is present after the midterm elections and absent after the presidential elections. The potential cause of the midterm election effect is a reduction of political uncertainty in the past ballot-casting periods. In the case of presidential elections, the uncertainty remains at an elevated level even after the selection of the commander-in-chief (head of state).

References

Allvine, F.C. & Neill, D.E.O. 1980, "Stock Market Returns and the Presidential Election Cycle", *Financial Analysts Journal,* vol. 36, no. 5, pp. 49.

Baker, S R, N Bloom & S J. D. 2016, "Measuring economic policy uncertainty", *Quarterly Journal of Economics* 131: 1593-1636.

Bernanke, B.S. & Blinder, A.S., 1992, "The Federal Funds Rate and the Channels of Monetary Transmission", *American Economic Review*, 82, pp 901-921.

Beyer, S.B., Jensen, G.R. & Johnson, R.R. 2008, "The Presidential Term", *The Journal of Portfolio Management,* vol. 34, no. 2, pp. 135-142.

Białkowski, J., Gottschalk, K. & Wisniewski, T.P. 2008, "Stock market volatility around national elections", *Journal of Banking and Finance,* vol. 32, no. 9, pp. 1941-1953.

Blanchard, O., & Perotti, R., 1999, "An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Ouptut", *NBER Working Paper* No. W7269.

Booth, L.C. & Booth, J.R. 2003, "Is presidential cycle in security returns merely a reflection of business conditions?", *Review of Financial Economics,* vol. 12, no. 2, pp. 131-159.

Campbell, J. 1999, "Asset Prices, Consumption and the Business Cycle", Amsterdam: North Holland Press, 1999.

Cochrane, J. 1996, "A Cross-sectional Test of an Investment-Based Asset Pricing Model", *Journal of Political Economy*, 104, pp. 572-621.

Conover, C.M., Jensen, G.R. Johnson, R.R. 2005, "Is Fed Policy Still Relevant for Investors?", *Financial Analysts Journal,* vol. 61, pp. 70-79.

Doll, Robert. 2010 " What Do The Mid-Term Elections Mean For Investors?", *BlackRock*, 3 November, Accessed 20 October 2017, https://www.boltonglobal.com/doc/What-Do-The-Midterm-Elections-Mean-For-Investors.pdf

Fama, E.F. 1990, "Stock Returns, Expected Returns , and Real Activity." *Journal of Finance*, 45, pp. 1089-1108.

Fisher, K. 2014, "Stand by for the great midterm market surge", *Financial Times, 7* September, p.10.

Gärtner, M. & Wellershoff, K.W. 1995, "Is there an election cycle in American stock returns", *International Review of Economics and Finance*, vol. 4, no. 4, pp. 387-410.

Greine, B. 2014, "The Oddity of Post-Election Stock Market Cycles", Forbes, 7

November, Accessed 20 October 2014, Retrieved: <https://www.forbes.com/sites/billgreiner/2014/11/07/the-oddity-of-post-election-stock-market-cycles/#7f0a91296a0b>

Goodell, J.W. & Vähämaa, S. 2013, "US presidential elections and implied volatility: The role of political uncertainty", *Journal of Banking & Finance,* vol. 37, no. 3, pp. 1108-1117.

Ho, T.SY., & Saunders, A. 1985, " A Micro Model of the Federal Funds Market", *Journal of Finance*, 40, pp 977-988.

Huang, R.D. 1985, "Common Stock Returns and Presidential Elections", *Financial Analysts Journal,* vol. 41, no. 2, pp. 58-61.

Jensen, G.R., Mercer J.M. & Johnson, R.R.,11996, " Business Conditions Monetary Policy and Expected Security Returns", *Journal of Financial Economics*, 40, pp. 213-237.

Julio, B. & Yook, Y. 2012, "Political Uncertainty and Corporate Investment Cycles", *The Journal of Finance*, vol. 67, no. 1, pp. 45-83.

Laurent, R.P. 1988, "An Interest-rate Based Indicator of Monetary Policy", *Fedral Reserve Bank of Chicago, Economic Perspectives*, pp. 3-14.

Li, J. & Born, J.A. 2006, "Presidential election uncertainty and common stock returns in the united states", *Journal of Financial Research*, vol. 29, no. 4, pp. 609-622.

Pastor, L & P Veronesi 2012, "Uncertainty about government policy and stock prices", *Journal of Finance* 67: 1219-1264.

Pastor, L & P Veronesi (2013), "Political uncertainty and risk premia", *Journal of Financial Economics* 110: 520-545.

Ramchander, S., Simpson, M.W. & Webb, J.R. 2009, "Political Cycles, Partisan Orientation, Gridlock, and REIT Returns", *Journal of Real Estate Portfolio Management,* vol. 15, no. 2, pp. 115.

Ramey, V., & Shapiro, M., 1997, " Costly Capital Reallocation and the Effects of Government Spending." Carnegie-Rochester Conference Series on Public Policy.

Stovall, R.H. 1992, "Forecasting Stock Market Performance via the Presidential Cycle", *Financial Analysts Journal,* vol. 48, no. 3, pp. 5-8.

Sturm, R.R. 2013, "Economic policy and the presidential election cycle in stock returns", *Journal of Economics and Finance,* vol. 37, no. 2, pp. 200-215.

Wong, W. & McAleer, M. 2009, "Mapping the Presidential Election Cycle in US stock markets", *Mathematics and Computers in Simulation,* vol. 79, no. 11, pp. 3267-3277.